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NEWS 2	AUG 10	Time limit for inactive STN sessions doubles to 40 minutes
NEWS 3	AUG 18	COMPENDEX indexing changed for the Corporate Source (CS) field
NEWS 4	AUG 24	ENCOMPLIT/ENCOMPLIT2 reloaded and enhanced
NEWS 5	AUG 24	CA/CAplus enhanced with legal status information for U.S. patents
NEWS 6	SEP 09	50 Millionth Unique Chemical Substance Recorded in CAS REGISTRY
NEWS 7	SEP 11	WPIDS, WPINDEX, and WPIX now include Japanese FTERM thesaurus
NEWS 8	OCT 21	Derwent World Patents Index Coverage of Indian and Taiwanese Content Expanded
NEWS 9	OCT 21	Derwent World Patents Index enhanced with human translated claims for Chinese Applications and Utility Models
NEWS 10	NOV 23	Addition of SCAN format to selected STN databases
NEWS 11	NOV 23	Annual Reload of IFI Databases
NEWS 12	DEC 01	FRFULL Content and Search Enhancements
NEWS 13	DEC 01	DGENE, USGENE, and PCTGEN: new percent identity feature for sorting BLAST answer sets
NEWS 14	DEC 02	Derwent World Patent Index: Japanese FI-TERM thesaurus added
NEWS 15	DEC 02	PCTGEN enhanced with patent family and legal status display data from INPADOCDB
NEWS 16	DEC 02	USGENE: Enhanced coverage of bibliographic and sequence information
NEWS 17	DEC 21	New Indicator Identifies Multiple Basic Patent Records Containing Equivalent Chemical Indexing in CA/CAplus
NEWS 18	JAN 12	Match STN Content and Features to Your Information Needs, Quickly and Conveniently
NEWS 19	JAN 25	Annual Reload of MEDLINE database
NEWS 20	FEB 16	STN Express Maintenance Release, Version 8.4.2, Is Now Available for Download
NEWS 21	FEB 16	Derwent World Patents Index (DWPI) Revises Indexing of Author Abstracts
NEWS 22	FEB 16	New FASTA Display Formats Added to USGENE and PCTGEN
NEWS 23	FEB 16	INPADOCDB and INPAFAMDB Enriched with New Content and Features
NEWS 24	FEB 16	INSPEC Adding Its Own IPC codes and Author's E-mail Addresses

NEWS EXPRESS FEBRUARY 15 10 CURRENT WINDOWS VERSION IS V8.4.2,
AND CURRENT DISCOVER FILE IS DATED 15 JANUARY 2010.

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FILE 'HOME' ENTERED AT 22:25:43 ON 11 MAR 2010

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                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.22       0.22

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FILE 'BIOSIS' ENTERED AT 22:25:56 ON 11 MAR 2010
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=> s periodontal and (transplant or implant) and biodegradable and
(brain(w)derived(w)neurotrophic(w)factor or bdnf or nerve(w)growth(w)factor or ngf
or neurotrophin(w)3 or neurotrophin(w)4/5)
'5' IS NOT A VALID FIELD CODE
'5' IS NOT A VALID FIELD CODE
'5' IS NOT A VALID FIELD CODE
'5' IS NOT A VALID FIELD CODE
L1           0 PERIODONTAL AND (TRANSPLANT OR IMPLANT) AND BIODEGRADABLE AND
               (BRAIN(W) DERIVED(W) NEUROTROPHIC(W) FACTOR OR BDNF OR NERVE(W)
               GROWTH(W) FACTOR OR NGF OR NEUROTROPHIN(W) 3 OR NEUROTROPHIN(W)
               4/5)

=> s periodontal and (transplant or implant) and biodegradable and
(brain(w)derived(w)neurotrophic(w)factor or bdnf or nerve(w)growth(w)factor or ngf
or neurotrophin(w)3 or neurotrophin(w)4)
L2           0 PERIODONTAL AND (TRANSPLANT OR IMPLANT) AND BIODEGRADABLE AND
               (BRAIN(W) DERIVED(W) NEUROTROPHIC(W) FACTOR OR BDNF OR NERVE(W)
               GROWTH(W) FACTOR OR NGF OR NEUROTROPHIN(W) 3 OR NEUROTROPHIN(W)
               4)

=> s periodontal and (brain(w)derived(w)neurotrophic(w)factor or bdnf or
nerve(w)growth(w)factor or ngf or neurotrophin(w)3 or neurotrophin(w)4)
L3         126 PERIODONTAL AND (BRAIN(W) DERIVED(W) NEUROTROPHIC(W) FACTOR OR
               BDNF OR NERVE(W) GROWTH(W) FACTOR OR NGF OR NEUROTROPHIN(W) 3
               OR NEUROTROPHIN(W) 4)
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=> s l3 and regeneration
L4          57 L3 AND REGENERATION

=> s l4 and biodegradable
L5           0 L4 AND BIODEGRADABLE

=> s l4 and (transplant or implant)
L6           2 L4 AND (TRANSPLANT OR IMPLANT)

=> dup rem l4
PROCESSING COMPLETED FOR L4
L7           28 DUP REM L4 (29 DUPLICATES REMOVED)

=> dup rem l6
PROCESSING COMPLETED FOR L6
L8            2 DUP REM L6 (0 DUPLICATES REMOVED)

=> dis his

     (FILE 'HOME' ENTERED AT 22:25:43 ON 11 MAR 2010)

     FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE' ENTERED AT 22:25:56 ON 11 MAR 2010
L1            0 S PERIODONTAL AND (TRANSPLANT OR IMPLANT) AND BIODEGRADABLE AND
L2            0 S PERIODONTAL AND (TRANSPLANT OR IMPLANT) AND BIODEGRADABLE AND
L3          126 S PERIODONTAL AND (BRAIN(W)DERIVED(W)NEUROTROPHIC(W)FACTOR OR B
L4           57 S L3 AND REGENERATION
L5            0 S L4 AND BIODEGRADABLE
L6            2 S L4 AND (TRANSPLANT OR IMPLANT)
L7           28 DUP REM L4 (29 DUPLICATES REMOVED)
L8            2 DUP REM L6 (0 DUPLICATES REMOVED)

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L8   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER:         2008:1529891  CAPLUS
DOCUMENT NUMBER:          150:71207
TITLE:                    Treatment of diseases and disorders using
                          self-renewing colony forming cells cultured and
                          expanded in vitro
INVENTOR(S):              Kopen, Gene; Wagner, Joseph; Ragaglia, Vanessa;
                          Heimbach, Baron; Gore, Richard S.
PATENT ASSIGNEE(S):       Neuronyx, Inc., USA
SOURCE:                   PCT Int. Appl., 138pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
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     WO 2008156728         A1    20081224    WO 2008-US7488          20080616
         W:  AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
             CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES,
             FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE,
             KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
             ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,
             PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM,
             TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
             IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK,
             TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
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TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

AU 2008266885	A1	20081224	AU 2008-266885	20080616
US 20090053183	A1	20090226	US 2008-140065	20080616
PRIORITY APPLN. INFO.:			US 2007-929151P P	20070615
			US 2007-929152P P	20070615
			US 2007-955204P P	20070810
			US 2007-996093P P	20071101
			WO 2008-US7488 W	20080616

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention relates to methods and uses of cells for the prevention and treatment of a wide variety of diseases and disorders and the repair and regeneration of tissues and organs using low passage and extensively passaged in vitro cultured, self- renewing, colony forming somatic cells (CF-SC). For example, adult bone marrow-derived somatic cells (ABM-SC), or compns. produced by such cells, are useful alone or in combination with other components for treating, for example, cardiovascular, neurol., integumentary, dermatol., periodontal, and immune mediated diseases, disorders, pathologies, and injuries.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2005:259902 CAPLUS
DOCUMENT NUMBER: 142:303690
TITLE: Remedy and therapeutic method for periodontal diseases and pulpal diseases with neurotrophic factors
INVENTOR(S): Kurihara, Hidemi; Kawaguchi, Hiroyuki; Takeda, Katsuhiro; Shiba, Hideki; Mizuno, Noriyoshi; Yoshino, Hiroshi; Hasegawa, Naohiko; Shinohara, Hiroaki
PATENT ASSIGNEE(S): Two Cells Co. Ltd., Japan
SOURCE: PCT Int. Appl., 86 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005025605	A1	20050324	WO 2004-JP13023	20040908
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004271843	A1	20050324	AU 2004-271843	20040908
EP 1671641	A1	20060621	EP 2004-787706	20040908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1871024	A	20061129	CN 2004-80031194	20040908
RU 2336089	C2	20081020	RU 2006-111465	20040908
US 20070071693	A1	20070329	US 2006-571069	20061207
PRIORITY APPLN. INFO.:			JP 2003-316719 A	20030909
			WO 2004-JP13023 W	20040908

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB It is intended to provide a remedy and a therapeutic method for periodontal diseases and pulpal diseases, a transplantation material for regenerating a periodontal tissue and a method of regenerating a periodontal tissue. Namely, a remedy for periodontal diseases and pulpal diseases comprising a neurotrophic factor as the active ingredient. The effect of brain-derived neurotrophic factor (BDNF) on cultured human periodontal ligament cell and human gingival keratinocyte was examined

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE' ENTERED AT 22:25:56 ON 11 MAR 2010

L1 0 S PERIODONTAL AND (TRANSPLANT OR IMPLANT) AND BIODEGRADABLE AND
L2 0 S PERIODONTAL AND (TRANSPLANT OR IMPLANT) AND BIODEGRADABLE AND
L3 126 S PERIODONTAL AND (BRAIN(W)DERIVED(W)NEUROTROPHIC(W)FACTOR OR B
L4 57 S L3 AND REGENERATION
L5 0 S L4 AND BIODEGRADABLE
L6 2 S L4 AND (TRANSPLANT OR IMPLANT)
L7 28 DUP REM L4 (29 DUPLICATES REMOVED)
L8 2 DUP REM L6 (0 DUPLICATES REMOVED)

=> dis ibib abs l7 1-28

L7 ANSWER 1 OF 28 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
ACCESSION NUMBER: 2010:63452 BIOSIS
DOCUMENT NUMBER: PREV201000063452
TITLE: Brain-Derived Neurotrophic Factor Protects Cementoblasts From Serum Starvation-Induced Cell Death.
AUTHOR(S): Kajiya, Mikihito; Shiba, Hideki [Reprint Author]; Fujita, Tsuyoshi; Takeda, Katsuhiro; Uchida, Yuushi; Kawaguchi, Hiroyuki; Kitagawa, Masae; Takata, Takashi; Kurihara, Hidemi
CORPORATE SOURCE: Hiroshima Univ, Grad Sch Biomed Sci, Dept Periodontal Med, Div Frontier Med Sci,Minami Ku, 1-2-3 Kasumi, Hiroshima 7348553, Japan
bashihi@hiroshima-u.ac.jp
SOURCE: Journal of Cellular Physiology, (DEC 2009) Vol. 221, No. 3, pp. 696-706.
CODEN: JCLLAX. ISSN: 0021-9541.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 20 Jan 2010
Last Updated on STN: 20 Jan 2010

AB Our previous studies have shown that brain-derived neurotrophic factor (BDNF) enhances bone/cementum-related protein gene expression through the TrkB-c-Raf-ERK1/2-Elk-1 signaling pathway in cementoblasts, which play a critical role in the establishment of a functional periodontal ligament. To clarify how BDNF regulates survival in cementoblasts, we examined its effects on cell death induced by serum starvation in immortalized human cementoblast-like (HCEM) cells. BDNF inhibited the death of HCEM cells. Small-interfering RNA (siRNA) for TRKB, a high affinity receptor for BDNF, and for Bcl-2, countered the BDNF-induced decrease in dead cell number. In addition, LY294002, a PI3-kinase inhibitor; SH-6, an Akt inhibitor; and

PDTC, a nuclear factor kappa B (NF-kappa B) inhibitor, but not PD98059, an ERK1/2 inhibitor, abolished the protective effect of BDNF against cell death. BDNF enhanced phosphorylated Akt levels, NF-kappa B activity in the nucleus, Bcl-2 mRNA levels, and mitochondrial membrane potential. The blocking of BDNF's actions by treatment with siRNA in all cases for TRKB and Bcl-2, LY294002, SH-6, and PDTC suppressed the enhancement. These findings provide the first evidence that a TrkB-PI3-kinase-Akt-NF-kappa B-Bcl-2 signaling pathway triggered by BDNF and the subsequent protective effect of BDNF on mitochondrial membrane potential are required to rescue HCEM cells from serum starvation-induced cell death. Furthermore, the survival and increased expression of bone/cementum-related proteins induced by BDNF in HCEM cells occur through different signaling pathways. J. Cell. Physiol. 221: 696-706, 2009. (C) 2009 Wiley-Liss, Inc.

L7 ANSWER 2 OF 28 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2009:1410501 CAPLUS
TITLE: Change of nerve growth factor in periodontal tissue during orthodontic tooth movement
AUTHOR(S): Hu, Xiaokun; Peng, Hui; Wang, Qingzhu; Chen, Wenjing
CORPORATE SOURCE: The Research Institute of Stomatology, Department of Orthodontics, School of Stomatology, Nanjing Medical University, Nanjing, 210029, Peop. Rep. China
SOURCE: Kouqiang Yixue (2009), 29(4), 205-207
CODEN: KYOIAY; ISSN: 1003-9872
PUBLISHER: Kouqiang Yixue Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The distribution and change of nerve growth factor (NGF) in periodontal tissue were observed and the role of NGF in orthodontic tooth movement was understood. Eighty-five male Sprague-Dawley rats were used. The animals were sacrificed after 0 d, 6 h, 12 h, 24 h, 3 d, 7 d, 14 d and 21 days, resp. Forces were applied on left maxillary first molar in rats, and the periodontal tissue was examined in different stages of tooth movement with immunohistochem. staining technique. NGF existed in normal periodontal tissue. The expression of it in periodontal tissue increased during orthodontic tooth movement, especially at the end of 5 days after force application. NGF activity changed regularly and played an important role in remodeling of periodontal tissue during orthodontic tooth movement. NGF might participate in reconstruction of the periodontal tissue in early stage and regeneration of the periodontal tissue in late stage.

L7 ANSWER 3 OF 28 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2009:1409787 CAPLUS
TITLE: Neurotrophins and periodontal tissue regeneration
AUTHOR(S): Li, Hongyan; Lin, Chongtao
CORPORATE SOURCE: School of Stomatology, Jilin University, Changchun, Jilin Province, 130041, Peop. Rep. China
SOURCE: Kouqiang Yixue Yanjiu (2009), 25(1), 109-111
CODEN: KYYOBZ; ISSN: 1671-7651
PUBLISHER: Kouqiang Yixue Yanjiu Zazhi Bianjibu
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Chinese
AB A review on the neurotrophins and their receptors, as well as their roles in periodontal tissue regeneration, including NGF, BDNF and NT4/5.

L7 ANSWER 4 OF 28 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2009:1411505 CAPLUS
DOCUMENT NUMBER: 152:112210
TITLE: Effect of nerve growth factor and basic fibroblast growth factor on proliferation of human periodontal ligament cells
AUTHOR(S): Wu, Yunxia; Shi, Jin; Sun, Xiaojun; Nie, Rui
CORPORATE SOURCE: Dept of Stomatology, First Clinical Medical College, Shanxi Medical University, Taiyuan, Shanxi Province, 030001, Peop. Rep. China
SOURCE: Shanxi Yike Daxue Xuebao (2009), 40(1), 50-52
CODEN: SDXYF5; ISSN: 1007-6611
PUBLISHER: Shanxi Yike Daxue Xuebao Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The effects of nerve growth factor (NGF) and basic fibroblast growth factor (bFGF) on proliferation of human periodontal ligament cells (hPDLCs) cultured in vitro were evaluated. Human periodontal ligament cells were cultured by explant separation method. The fifth to seventh generation hPDLCs were cultured with the different concns. of NGF, bFGF and NGF + bFGF. The proliferation of hPDLCs was measured by MTT colorimetric assay. Data was analyzed by ANOVA. Proliferation of hPDLCs increased in a dose-dependent manner after cultured with NGF or bFGF. The NGF and bFGF had synergetic effect on proliferation of hPDLCs. NGF and bFGF can be used as bioactive mediators for periodontal regeneration.

L7 ANSWER 5 OF 28 MEDLINE on STN
ACCESSION NUMBER: 2009642090 IN-PROCESS
DOCUMENT NUMBER: PubMed ID: 19773628
TITLE: Growth factors/cytokines/defensins and apoptosis in periodontal pathologies.
AUTHOR: Laurina Zane; Pilmane Mara; Care Ruta
CORPORATE SOURCE: Riga Stradins University, Institute of Stomatology, 20 Dzirciema Street, Riga, Latvia, LV 1007.. zlaurina@inbox.lv
SOURCE: Stomatologija / issued by public institution "Odontologijos studija" ... [et al.], (2009) Vol. 11, No. 2, pp. 48-54. Journal code: 101248498. ISSN: 1392-8589. L-ISSN: 1392-8589.
PUB. COUNTRY: Lithuania
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: NONMEDLINE; IN-DATA-REVIEW; IN-PROCESS; NONINDEXED; Dental Journals; Priority Journals
ENTRY DATE: Entered STN: 24 Sep 2009
Last Updated on STN: 16 Dec 2009
AB In the recent past there has been an increased emphasis on morphogenetic tissue research of periodontal tissues. The aim of this study was to find qualitative and quantitative correlations in distribution and appearance of growth factors/cytokines/defensins and apoptosis in periodontal pathologies. MATERIAL AND METHODS. Tissue was obtained from 5 controls and 6 chronical periodontitis patients 30-50 years of age referred to Latvian Institute of Stomatology. Histological investigations were performed at the Institute of Anatomy and Anthropology of Riga Stradins University. RESULTS. Epithelial cells abundantly expressed IL10 in patients. The expression of b-defensins was very variable in both sulcular and gingival epithelium. TUNEL positive cells were observed in patients and control specimens with dominance in control group. Gingival epithelium showed moderate expression of bFGF whereas few to moderate cells were positive for bFGF in sulcular epithelium.

Fibroblast growth factor receptor (FGF-1R) was abundant in gingival epithelium and in connective tissue cells, but almost not detectable in sulcular epithelium. Insulin-like growth factor receptor was not expressed in gingival epithelium and was weakly seen in basal layer of sulcular epithelium. Basic nerve growth factor expresion in both types of epithelium was numerous to abundant. Staining for the NGFR in the gingival epithelium was variable, with prevalence to be moderate whereas sulcular epithelium was free from any factor immunoreactivity. CONCLUSION. 1. Finding of apoptotic cells are variable and seems to correlate with the expression of defensins in oral epithelium in patients with periodontitis. 2. FGFR was expressed more than the bFGF, but in case with NGFR and bNGF situation was opposite. Although IGFRI was found in sulcular epithelium with no expression in gingival one suggesting about stimulation in regeneration /adaptation in periodontitis affected tissue. 3. The expression of growth factors and their receptors in sulcular epithelium was lower than into the gingival epithelium and seems to be specific for periodontitis.

L7 ANSWER 6 OF 28 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2008:1529891 CAPLUS
DOCUMENT NUMBER: 150:71207
TITLE: Treatment of diseases and disorders using self-renewing colony forming cells cultured and expanded in vitro
INVENTOR(S): Kopen, Gene; Wagner, Joseph; Ragaglia, Vanessa; Heimbach, Baron; Gore, Richard S.
PATENT ASSIGNEE(S): Neuronyx, Inc., USA
SOURCE: PCT Int. Appl., 138pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2008156728	A1	20081224	WO 2008-US7488		20080616
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2008266885	A1	20081224	AU 2008-266885		20080616
US 20090053183	A1	20090226	US 2008-140065		20080616
PRIORITY APPLN. INFO.:			US 2007-929151P	P	20070615
			US 2007-929152P	P	20070615
			US 2007-955204P	P	20070810
			US 2007-996093P	P	20071101
			WO 2008-US7488	W	20080616

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB The present invention relates to methods and uses of cells for the prevention and treatment of a wide variety of diseases and disorders and the repair and regeneration of tissues and organs using low passage and extensively passaged in vitro cultured, self- renewing, colony forming somatic cells (CF-SC). For example, adult bone marrow-derived

somatic cells (ABM-SC), or compns. produced by such cells, are useful alone or in combination with other components for treating, for example, cardiovascular, neurol., integumentary, dermatol., periodontal, and immune mediated diseases, disorders, pathologies, and injuries.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 28 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2008408883 MEDLINE
DOCUMENT NUMBER: PubMed ID: 18390540
TITLE: Brain-derived neurotrophic factor stimulates bone/cementum-related protein gene expression in cementoblasts.
AUTHOR: Kajiya Mikihito; Shiba Hideki; Fujita Tsuyoshi; Ouhara Kazuhisa; Takeda Katsuhiro; Mizuno Noriyoshi; Kawaguchi Hiroyuki; Kitagawa Masae; Takata Takashi; Tsuji Koichiro; Kurihara Hidemi
CORPORATE SOURCE: Department of Periodontal Medicine, Hiroshima University Graduate School of Biomedical Sciences, Minami-ku, Hiroshima 34-8553, Japan.
SOURCE: The Journal of biological chemistry, (2008 Jun 6) Vol. 283, No. 23, pp. 16259-67. Electronic Publication: 2008-04-03. Journal code: 2985121R. ISSN: 0021-9258. L-ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200807
ENTRY DATE: Entered STN: 27 Jun 2008
Last Updated on STN: 16 Jul 2008
Entered Medline: 15 Jul 2008
AB Brain-derived neurotrophic factor (BDNF), recognized as essential in the developing nervous system, is involved in differentiation and proliferation in non-neuronal cells, such as endothelial cells, osteoblasts, and periodontal ligament cells. We have focused on the application of BDNF to the regeneration of periodontal tissue and indicated that BDNF promotes the regeneration of experimentally created periodontal defects. Cementoblasts form cementum, mineralized tissue, which is key to establishing a functional periodontium. The application of BDNF to the regeneration of periodontal tissue requires elucidation of the mechanism by which BDNF regulates the functions of cementoblasts. In this study, we examined how BDNF regulates the mRNA expression of bone/cementum-related proteins (alkaline phosphatase (ALP), osteopontin (OPN), and bone morphogenetic protein-2 (BMP-2)) in cultures of immortalized human cementoblast-like (HCEM) cells. BDNF elevated the mRNA levels of ALP, OPN, and BMP-2 in HCEM cells. Small interfering RNA (siRNA) for TRKB, a high affinity receptor of BDNF, siRNA for ELK-1, which is a downstream target of ERK1/2, and PD98059, an ERK inhibitor, obviated the increase in the mRNA levels. BDNF increased the levels of phosphorylated ERK1/2 and Elk-1, and the blocking of BDNF signaling by treatment with siRNA for TRKB and PD98059 suppressed the phosphorylation of ERK1/2 and Elk-1. Furthermore, BDNF increased the levels of phosphorylated c-Raf, which activates the ERK signaling pathway. These findings provide the first evidence that the TrkB-c-Raf-ERK1/2-Elk-1 signaling pathway is required for the BDNF-induced mRNA expression of ALP, OPN, and BMP-2 in HCEM cells.

L7 ANSWER 8 OF 28 MEDLINE on STN DUPLICATE 2

ACCESSION NUMBER: 2008714203 MEDLINE
DOCUMENT NUMBER: PubMed ID: 18980528
TITLE: Effect of neurotrophin-4/5 on bone/cementum-related protein expressions and DNA synthesis in cultures of human periodontal ligament cells.
AUTHOR: Mizuno Noriyoshi; Shiba Hideki; Inui Takafumi; Takeda Katsuhiro; Kajiya Mikihito; Hasegawa Naohiko; Kawaguchi Hiroyuki; Kurihara Hidemi
CORPORATE SOURCE: Department of Periodontal Medicine, Hiroshima University Graduate School of Biomedical Sciences, Hiroshima, Japan.. mizuno@hiroshima-u.ac.jp
SOURCE: Journal of periodontology, (2008 Nov) Vol. 79, No. 11, pp. 2182-9.
Journal code: 8000345. ISSN: 0022-3492. L-ISSN: 0022-3492.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 200902
ENTRY DATE: Entered STN: 5 Nov 2008
Last Updated on STN: 15 Feb 2009
Entered Medline: 12 Feb 2009

AB BACKGROUND: We studied neurotrophins (NTs) as signaling molecules for periodontal tissue regeneration and showed that nerve growth factor (NGF) and brain-derived neurotrophic factor (BDNF) modulate the proliferation and differentiation of human periodontal ligament (HPL) cells in vitro. The purpose of this study was to investigate whether NT-4/5 also has the ability to regulate the function of HPL cells. METHODS: mRNA expressions of NT-4/5 and its high-affinity tyrosine kinase receptor (trk)B were analyzed in HPL cells by reverse transcription-polymerase chain reaction. We examined how NT-4/5 regulates the mRNA expression of bone/cementum-related proteins (alkaline phosphatase [ALPase], osteopontin [OPN], osteocalcin [OC], and bone morphogenetic protein [BMP]-2) in cultures of HPL cells. Moreover, the effects of NT-4/5 on calcification, the production of OPN and OC, and DNA synthesis in HPL cells were examined. RESULTS: NT-4/5 and trkB mRNA were expressed in HPL cells. NT-4/5 elevated the mRNA levels of ALPase, OPN, OC, and BMP-2 and the syntheses of OPN, OC, and DNA in HPL cells. PD98059, an extracellular signal-regulated kinase (ERK) inhibitor, obviated the increase in the mRNA levels of ALPase, OPN, OC, and BMP-2. NT-4/5 increased the levels of phosphorylated ERK1/2. Furthermore, NT-4/5 enhanced the amount of mineral deposits in cultures of HPL cells. CONCLUSION: NT-4/5, as well as BDNF and NGF, is suggested to play a role in the regulation of function of periodontal ligament cells.

L7 ANSWER 9 OF 28 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2008305944 MEDLINE
DOCUMENT NUMBER: PubMed ID: 18380567
TITLE: Cellular motility of Down syndrome gingival fibroblasts is susceptible to impairment by Porphyromonas gingivalis invasion.
AUTHOR: Murakami Jumpei; Kato Takahiro; Kawai Shinji; Akiyama Shigehisa; Amano Atsuo; Morisaki Ichijiro
CORPORATE SOURCE: Division of Special Care Dentistry, Osaka University Dental Hospital, Suita-Osaka, Japan.
SOURCE: Journal of periodontology, (2008 Apr) Vol. 79, No. 4, pp. 721-7.
Journal code: 8000345. ISSN: 0022-3492. L-ISSN: 0022-3492.
PUB. COUNTRY: United States

DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 200807
ENTRY DATE: Entered STN: 13 May 2008
Last Updated on STN: 1 Aug 2008
Entered Medline: 31 Jul 2008

AB BACKGROUND: Severe periodontal breakdown is often associated with Down syndrome (DS); however, the etiology of this condition is not understood fully. Cellular motility of gingival fibroblasts is a critical event for wound healing and regeneration of periodontal tissues. Porphyromonas gingivalis is known to be a periodontal pathogen that invades host cells, contributing to periodontal destruction. In this study, we examined the influence of P. gingivalis infection on the motility of DS gingival fibroblasts (DGFs). METHODS: DGFs and normal gingival fibroblasts (NGFs) were infected with P. gingivalis with type II fimbriae, and cellular motility was evaluated using an in vitro wounding assay. Protein degradation of alpha5beta1-integrin subunits and a migration-regulating signaling molecule, paxillin, were investigated using specific antibodies. The adhesion to and invasion of fibroblasts by P. gingivalis were determined with a colony forming assay. The gene expressions of alpha5beta1-integrin subunits were also quantified using a reverse transcription-polymerase chain reaction method. RESULTS: The cellular motility of DGFs was impaired significantly by P. gingivalis compared to NGFs, and the former were invaded readily by P. gingivalis. Further, cellular paxillin from DGFs was degraded markedly by the pathogen. Although protein degradation of alpha5beta1 integrin was induced, its mRNA expression was not affected significantly. CONCLUSIONS: P. gingivalis readily invades DGFs and subsequently degrades paxillin, which impairs cellular motility and likely prevents wound healing and the regeneration of periodontal tissues. These characteristics may be involved in the etiology of DS periodontitis.

L7 ANSWER 10 OF 28 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2009:152456 CAPLUS
DOCUMENT NUMBER: 151:1669
TITLE: Effect of nerve growth factor and recombinant human bone morphogenetic protein on the proliferation and alkaline phosphatase activity of human periodontal ligament cells
AUTHOR(S): Shi, Jin; Wu, Yunxia
CORPORATE SOURCE: First Affiliated Hospital, Shanxi Medical University, Taiyuan, Shanxi Province, 030001, Peop. Rep. China
SOURCE: Shanxi Yiyao Zazhi (2008), 37(3), 225-227
CODEN: SIYCDB; ISSN: 0253-9926
PUBLISHER: Shanxi Yiyao Zazhishe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB The in vitro biol. effects of nerve growth factor and recombinant human bone morphogenetic protein on the proliferation and alkaline phosphatase activity of human periodontal ligament (PDL) cells were evaluated. Human periodontal ligament cells were cultured by tissue explant and its proliferation was measured by MTT colorimetric assay. ALPase activity was measured by enzyme kinetic methods. Data was analyzed by ANOVA. NGF or rhBMP-2 can stimulate human PDL cells proliferation in a dose-dependent manner. The coordinate use of NGF and rhBMP-2 has synergetic effect on PDL cells proliferation. NGF and rhBMP-2 can be used as bioactive

mediators on periodontal regeneration.

L7 ANSWER 11 OF 28 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2007056449 MEDLINE
DOCUMENT NUMBER: PubMed ID: 17245704
TITLE: Involvement of neurotrophin-4/5 in regeneration of the periodontal Ruffini endings at the early stage.
AUTHOR: Jabbar Shahiqul; Harada Fumiko; Aita Megumi; Ohishi Megumi; Saito Isao; Kawano Yoshiro; Suzuki Akiko; Nozawa-Inoue Kayoko; Maeda Takeyasu
CORPORATE SOURCE: Division of Oral Anatomy, Niigata University Graduate School of Medical and Dental Sciences, Niigata, Japan.
SOURCE: The Journal of comparative neurology, (2007 Mar 20) Vol. 501, No. 3, pp. 400-12.
Journal code: 0406041. ISSN: 0021-9967. L-ISSN: 0021-9967.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200703
ENTRY DATE: Entered STN: 31 Jan 2007
Last Updated on STN: 24 Mar 2007
Entered Medline: 20 Mar 2007

AB Little is known about the role of neurotrophin-4/5 (NT-4/5) in the regeneration of mechanoreceptors. Therefore, the present study examined the regeneration process of Ruffini endings in the periodontal ligament in nt-4/5-deficient and wildtype mice following transection of the inferior alveolar nerve by immunohistochemistry for protein gene product 9.5 (PGP 9.5), a general neuronal marker, and by computer-assisted quantitative image analysis. Furthermore, rescue experiments by a continuous administration of recombinant NT-4/5 were performed and analyzed quantitatively. At postoperative day 3 (PO 3d), almost all PGP 9.5-positive neural elements had disappeared; they began to appear in both types of animals at PO 7d. At PO 10d, almost all nerve fibers showed a beaded appearance, with fewer ramifications in both types of mice. Although the regeneration proceeded in the wildtype, a major population of the periodontal Ruffini endings continued to display smooth outlines at PO 28d in the nt-4/5 homozygous mice. The reduction ratio of neural density reached a maximum at PO 3d, decreased at PO 10d, and later showed a plateau. In a rescue experiment, an administration of NT-4/5 showed an acceleration of nerve regeneration in the homozygous mice. These findings indicate that the nt-4/5-depletion causes a delay in the regeneration of the periodontal Ruffini endings, but the delay is shortened by an exogenous administration of NT-4/5. Combined with our previous findings of bdnf-deficient mice (Harada et al. [2003] Arch Histol Cytol 66:183-194), these morphological and numerical data suggest that multiple neurotrophins such as NT-4/5 and brain -derived neurotrophic factor (BDNF) play roles in their regeneration in a stage-specific manner. 2007 Wiley-Liss, Inc.

L7 ANSWER 12 OF 28 EMBASE
ACCESSION NUMBER: 2006323714 EMBASE
TITLE: Therapeutic modulation of growth factors and cytokines in regenerative medicine.
AUTHOR: Ioannidou, Effie (correspondence)
CORPORATE SOURCE: Department of Periodontology, School of Dental Medicine, University of Connecticut Health Center, Farmington, CT,

United States. ioannidou@uchc.edu
SOURCE: Current Pharmaceutical Design, (Jul 2006) Vol. 12, No. 19, pp. 2397-2408.
Refs: 133
ISSN: 1381-6128 CODEN: CPDEFP
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; General Review; (Review)
FILE SEGMENT: 026 Immunology, Serology and Transplantation
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 27 Jul 2006
Last Updated on STN: 27 Jul 2006

AB Regeneration that takes place in the human body is limited throughout life. Therefore, when organs are irreparably damaged, they are usually replaced with an artificial device or donor organ. The term "regenerative medicine" covers the restoration or replacement of cells, tissues, and organs. Stem cells play a major role in regenerative medicine by providing the way to repopulate organs damaged by disease. Stem cells have the ability to self renew and to regenerate cells of diverse lineages within the tissue in which they reside. Stem cells could originate from embryos or adult tissues. Growth factors are proteins that may act locally or systemically to affect the growth of cells in several ways. Various cell activities, including division, are influenced by growth factors. Cytokines are a family of low-molecular-weight proteins that are produced by numerous cell types and are responsible for regulating the immune response, inflammation, tissue remodeling and cellular differentiation. Target cells of growth factors and cytokines are mesenchymal, epithelial and endothelial cells. These molecules frequently have overlapping activities and can act in an autocrine or paracrine fashion. A complex network of growth factors and cytokines guides cellular differentiation and regeneration in all organs and tissues. The aim of this paper is to review the role of growth factors and cytokines in different organs or systems and explore their therapeutic application in regenerative medicine. The role of stem cells combined with growth factors and cytokines in the regeneration of vascular and hematopoietic, neural, skeletal, pancreatic, periodontal, and mucosal tissue is reviewed. There is evidence that supports the use of growth factors and cytokines in the treatment of neurological diseases, diabetes, cardiovascular disease, periodontal disease, cancer and its complication, oral mucositis. After solving the ethical issues and establishing clear and reasonable regulations, regenerative medicine through stem cell application combined with specific growth factors and cytokines will have great potential in curing a variety of human disease. .COPYRGT. 2006 Bentham Science Publishers Ltd.

L7 ANSWER 13 OF 28 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 2006301795 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16671871
TITLE: Promotion of functioning of human periodontal ligament cells and human endothelial cells by nerve growth factor.
AUTHOR: Xu Wan-Peng; Mizuno Noriyoshi; Shiba Hideki; Takeda Katsuhiro; Hasegawa Naohiko; Yoshimatsu Shinitiro; Inui Takafumi; Ozeki Yoshitaka; Niitani Miyuki; Kawaguchi Hiroyuki; Tsuji Koichiro; Kato Yukio; Kurihara Hidemi
CORPORATE SOURCE: Department of Periodontal Medicine, Division of Frontier Medical Science, Hiroshima University Graduate School of Biomedical Sciences, Hiroshima, Japan.

SOURCE: Journal of periodontology, (2006 May) Vol. 77, No. 5, pp. 800-7.
Journal code: 8000345. ISSN: 0022-3492. L-ISSN: 0022-3492.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 200607
ENTRY DATE: Entered STN: 31 May 2006
Last Updated on STN: 20 Jul 2006
Entered Medline: 19 Jul 2006

AB BACKGROUND: We have previously shown that cultured human periodontal ligament (HPL) cells produce nerve growth factor (NGF) and express mRNA of tyrosine kinase receptor (trkA), a high-affinity receptor of NGF. These findings suggest that NGF modulates the differentiation and proliferation of the periodontal ligament cells by paracrine and autocrine functions in vivo. Endothelial cells also express NGF and trkA. Therefore, NGF may regulate functions of periodontal ligament cells and endothelial cells during periodontal tissue regeneration. METHODS: Effects of NGF on expressions of bone/cementum-related proteins (osteocalcin [OC], bone sialoprotein [BSP], bone morphogenetic protein [BMP-7], core binding factor alpha [Cbfa-1], and type I collagen), calcification in HPL cells, and proliferation and mRNA expression of vascular endothelial growth factor (VEGF), an endothelial cell mitogen, in human microvascular endothelial cells (HMVECs) were examined. RESULTS: NGF elevated mRNA levels of OC, BSP, BMP-7, Cbfa-1, and type I collagen and enhanced mineral deposition in cultures of HPL cells. Furthermore, NGF stimulated mRNA expressions of VEGF-A and VEGF-B and cell proliferation in HMVEC. CONCLUSION: These findings suggest that the functional regulation of periodontal ligament cells and endothelial cells by NGF might result in the acceleration of periodontal tissue regeneration in vivo.

L7 ANSWER 14 OF 28 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 2006255023 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16513266
TITLE: Expression of GDNF and its receptors in the periodontal mechanoreceptor.
AUTHOR: Aita Megumi; Kawano Yoshiro; Maeda Takeyasu
CORPORATE SOURCE: Division of Oral Anatomy, Niigata University Graduate School of Medical and Dental Sciences, Niigata, Japan.. aitam@dent.niigata-u.ac.jp
SOURCE: Neuroscience letters, (2006 May 29) Vol. 400, No. 1-2, pp. 25-9. Electronic Publication: 2006-03-02.
Journal code: 7600130. ISSN: 0304-3940. L-ISSN: 0304-3940.
PUB. COUNTRY: Ireland
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200608
ENTRY DATE: Entered STN: 9 May 2006
Last Updated on STN: 5 Aug 2006
Entered Medline: 4 Aug 2006

AB Our previous studies have revealed the involvement of signaling pathways of BDNF and NT-4/5 via TrkB in the development, regeneration, survival and maintenance of the Ruffini endings, primary mechanoreceptors in the periodontal ligament. However,

the involvement of other neurotrophins remains unclear. The present study examined the expression of GDNF, GFRalpha1, and RET in the incisor periodontal ligament and trigeminal ganglion of young rats by RT-PCR and immunocytochemistry. All these mRNAs were detected in both tissues by RT-PCR. These immunoreactions were found in the terminal Schwann cells associated with the periodontal Ruffini endings, as confirmed by histochemistry for non-specific cholinesterase activity. Their axonal branches showed GFRalpha1- and RET-immunoreactions but lacked GDNF-immunoreactivity. In the trigeminal ganglion, about 30% of the neurons were immunoreactive to GFRalpha1 and RET. Averages of cross-sectional areas of their positive neurons demonstrated that they could mainly be categorized as medium-sized neurons. GDNF-immunoreaction was restricted to the satellite cells and not in trigeminal ganglion neurons. These findings indicate that GDNF mediates trophic effects on the survival and target innervation of the periodontal Ruffini endings via GFRalpha1 and RET.

L7 ANSWER 15 OF 28 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:259902 CAPLUS
DOCUMENT NUMBER: 142:303690
TITLE: Remedy and therapeutic method for periodontal diseases and pulpal diseases with neurotrophic factors
INVENTOR(S): Kurihara, Hidemi; Kawaguchi, Hiroyuki; Takeda, Katsuhiro; Shiba, Hideki; Mizuno, Noriyoshi; Yoshino, Hiroshi; Hasegawa, Naohiko; Shinohara, Hiroaki
PATENT ASSIGNEE(S): Two Cells Co. Ltd., Japan
SOURCE: PCT Int. Appl., 86 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005025605	A1	20050324	WO 2004-JP13023	20040908
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004271843	A1	20050324	AU 2004-271843	20040908
EP 1671641	A1	20060621	EP 2004-787706	20040908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1871024	A	20061129	CN 2004-80031194	20040908
RU 2336089	C2	20081020	RU 2006-111465	20040908
US 20070071693	A1	20070329	US 2006-571069	20061207
PRIORITY APPLN. INFO.:			JP 2003-316719 A	20030909
			WO 2004-JP13023 W	20040908

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB It is intended to provide a remedy and a therapeutic method for periodontal diseases and pulpal diseases, a transplantation material for regenerating a periodontal tissue and a method of regenerating a periodontal tissue. Namely, a remedy for periodontal diseases and pulpal diseases comprising a neurotrophic

factor as the active ingredient. The effect of brain-derived neurotrophic factor (BDNF) on cultured human periodontal ligament cell and human gingival keratinocyte was examined

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 16 OF 28 MEDLINE on STN DUPLICATE 7

ACCESSION NUMBER: 2005583578 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16259615
TITLE: Brain-derived neurotrophic factor enhances periodontal tissue regeneration.
AUTHOR: Takeda Katsuhiro; Shiba Hideki; Mizuno Noriyoshi; Hasegawa Naohiko; Mouri Yoshihiro; Hirachi Akio; Yoshino Hiroshi; Kawaguchi Hiroyuki; Kurihara Hidemi
CORPORATE SOURCE: Department of Periodontal Medicine, Division of Frontier Medical Science, Hiroshima University Graduate School of Biomedical Sciences, Hiroshima, Japan.
SOURCE: Tissue engineering, (2005 Sep-Oct) Vol. 11, No. 9-10, pp. 1618-29.
Journal code: 9505538. ISSN: 1076-3279. L-ISSN: 1076-3279.
PUB. COUNTRY: United States
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200512
ENTRY DATE: Entered STN: 3 Nov 2005
Last Updated on STN: 23 Dec 2005
Entered Medline: 22 Dec 2005

AB To address whether brain-derived neurotrophic factor (BDNF) could be involved in periodontal tissue regeneration, we examined the effects of BDNF on proliferation and the expression of bone (cementum)- related proteins (osteopontin, bone morphogenetic protein [BMP]-2, type I collagen, alkaline phosphatase [ALPase], and osteocalcin) in cultures of human periodontal ligament (HPL) cells, which are thought to be prerequisite for periodontal tissue regeneration, and on proliferation and angiogenesis in human endothelial cells. Furthermore, we examined the effect of BDNF on the regeneration of periodontal tissues in experimentally induced periodontal defects in dogs. BDNF elevated the expression of ALPase and osteocalcin mRNAs and increased the synthesis of osteopontin, BMP-2, and type I collagen DNA in HPL cells. BDNF stimulated mRNA expression of vascular endothelial growth factor-B and tenascin-X, and proliferation and angiogenesis in human endothelial cells. In vivo studies showed that BDNF stimulated the formation of new alveolar bone cementum and connective new fibers, which were inserted into the newly formed cementum and bone. BDNF also stimulated blood capillary formation. These findings suggest that the regulation of functioning of periodontal ligament cells and endothelial cells by BDNF results in the promotion of periodontal tissue regeneration.

L7 ANSWER 17 OF 28 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN

ACCESSION NUMBER: 2005:116637 BIOSIS
DOCUMENT NUMBER: PREV200500115225
TITLE: The involvement of BDNF in development/ regeneration of the periodontal Ruffini

ending.
AUTHOR(S): Maeda, T. [Reprint Author]
CORPORATE SOURCE: Div Oral AnatGrad Sch Med Dent Sci, Niigata Univ, Niigata, Japan
maedat@dent.niigata-u.ac.jp
SOURCE: Anatomical Science International, (August 2004) Vol. 79, No. August, pp. 78. print.
Meeting Info.: 16th International Congress of the IFAA (International Federation of Associations of Anatomists) and the 109th Annual Meeting of the Japanese Association of Anatomists. Kyoto, Japan. August 22-27, 2004. Japanese Association of Anatomists; International Federation of Associations of Anatomists.
ISSN: 1447-6959 (ISSN print).
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 23 Mar 2005
Last Updated on STN: 23 Mar 2005

L7 ANSWER 18 OF 28 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:463163 BIOSIS
DOCUMENT NUMBER: PREV200510243637
TITLE: Endoneural fibroblasts isolation and culture.
Original Title: Aislamiento y cultivo de fibroblastos endoneurales.
AUTHOR(S): Leau, Leslie [Reprint Author]; Perdomo, Sandra; Spinel, Clara
CORPORATE SOURCE: Univ Nacl Colombia, Fac Ciencias, Dept Biol, Bogota, Colombia
SOURCE: Acta Biologica Colombiana, (2004) Vol. 9, No. 2, pp. 57-65.
ISSN: 0120-548X.
DOCUMENT TYPE: Article
LANGUAGE: Spanish
ENTRY DATE: Entered STN: 9 Nov 2005
Last Updated on STN: 9 Nov 2005
AB Fibroblasts which are tissue-specific, constantly degrade and synthesize the different elements of the extra-cellular matrix (ECM), while at the same time remodel tissues that are being repaired. Dermal fibroblasts are well studied both in vitro and in vivo, and are used to regenerate dermal EMC which in turn supports the regeneration of the epidermis. Confluence of dermal or periodontal fibroblasts takes place between 8 and 10 days of culture. In the process of regeneration of damaged peripheral nerves, Schwann's cells secrete neurotrophic and neurotropic growth factors and some of the EMC elements needed for regeneration to take place, which makes them the most studied and used cells in culture. So far, endoneural fibroblasts (EF) have not been considered as important elements in nerve regeneration, mainly because they may occasionally form fibromes that hinder regeneration. But there is evidence that they may play a role in the remodeling of the EMC, through the secretion of metalloproteins that modify the pre-Nerve Growth Factor (preNGF) secreted by Schwann's cells into active NGF, which promotes neurites regeneration. The aim of this study was is to isolate EF from sciatic nerves taken from mature rats, and to obtain them in purified culture. A number of methods of dissection and digestion were developed to obtain primary pure EF cultures as well as to study them in the way Schwann's cells have been studied. Selective isolation of EF was accomplished, reaching confluence between the fourth and the fifth day in monolayer primary culture. Producing a population of EF will make it possible to carry out studies in tridimensional culture and in prosthesis

in order to define and develop new alternatives for the regeneration of peripheral nerves.

L7 ANSWER 19 OF 28 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 2003316788 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12846558
TITLE: The involvement of brain-derived neurotrophic factor (BDNF) in the regeneration of periodontal Ruffini endings following transection of the inferior alveolar nerve.
AUTHOR: Harada Fumiko; Hoshino Natalia; Hanada Kooji; Kawano Yoshiro; Atsumi Yukako; Wakisaka Satoshi; Maeda Takeyasu
CORPORATE SOURCE: Division of Oral Anatomy, Department of Oral Biological Science, Niigata University Graduate School of Medical and Dental Sciences, Niigata, Japan.
SOURCE: Archives of histology and cytology, (2003 May) Vol. 66, No. 2, pp. 183-94.
Journal code: 8806082. ISSN: 0914-9465. L-ISSN: 0914-9465.
PUB. COUNTRY: Japan
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200310
ENTRY DATE: Entered STN: 9 Jul 2003
Last Updated on STN: 8 Oct 2003
Entered Medline: 7 Oct 2003

AB The present study employed immunohistochemistry for protein gene product 9.5 (PGP 9.5) to examine the regeneration process of Ruffini endings, the primary mechanoreceptor in the periodontal ligament, in heterozygous mice with targeted disruption of the brain-derived neurotrophic factor (BDNF) gene and their littermates, following transection of the inferior alveolar nerve. When immunostained for PGP 9.5, periodontal Ruffini endings appeared densely distributed in the periodontal ligament of the heterozygous mice, but the density of the positively stained nerve fibers in the ligament was 20% lower than that in the control littermates. At 3 days after surgery, the PGP 9.5-positive neural elements had disappeared; they began to appear in the periodontal ligament of both animals at 7 days. However, the recovery pattern of the PGP 9.5-positive nerves differed between heterozygous and wild type mice, typical periodontal Ruffini endings morphologically identical to those in the control group appeared in the wild-type mice at 7 days, whereas such Ruffini endings were detectable in the heterozygous mice at 28 days, though much smaller in number. On day 28, when PGP 9.5-positive nerves were largely regenerated in wild type mice, their distribution was much less dense in the ligament of the heterozygous mice than in the non-treated heterozygous mice. The density of PGP 9.5-positive nerve fibers was significantly lower in the heterozygous mice than in wild type mice at any stage examined. These data showing that a reduced expression of BDNF causes delayed regeneration of the periodontal Ruffini endings suggest the involvement of BDNF in the regeneration process of these mechanoreceptors.

L7 ANSWER 20 OF 28 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 2003081727 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12593600
TITLE: Neurotrophins in cultured cells from periodontal tissues.

AUTHOR: Kurihara Hidemi; Shinohara Hiroaki; Yoshino Hiroshi; Takeda Katsuhiro; Shiba Hideki
CORPORATE SOURCE: Department of Periodontal Medicine, Division of Frontier Medical Science, Hiroshima University Graduate School of Biomedical Science, Hiroshima, Japan..
hkuri@hiroshima-u.ac.jp
SOURCE: Journal of periodontology, (2003 Jan) Vol. 74, No. 1, pp. 76-84. Ref: 67
Journal code: 8000345. ISSN: 0022-3492. L-ISSN: 0022-3492.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 200305
ENTRY DATE: Entered STN: 21 Feb 2003
Last Updated on STN: 8 May 2003
Entered Medline: 7 May 2003
AB We review the basic functions of neurotrophins and their receptors and discuss the expression and functions of neurotrophins and their specific receptors based on recent data using cultured cells from human periodontal tissues. Neurotrophins, nerve growth factor (NGF), brain-derived neurotrophic factor (BDNF), and neurotrophin-3 (NT-3) play crucial roles in the differentiation and survival of neural cells. Neurotrophins activate 2 different receptor classes: the tropomyosin-related kinase (Trk) family of receptor tyrosine kinases (TrkA, TrkB, and TrkC) and the p75 receptor, a member of the tumor necrosis factor receptor superfamily. Neurotrophins regulate both cell death and cell survival through activations of Trk receptors and/or p75 neurotrophin receptor. It has been reported that neurotrophins are also produced from non-neuronal cells, such as leukocytes, osteoblasts, or fibroblasts, and act in many other ways on non-neuronal cells. Neurotrophin expression during bone fracture healing is especially interesting, and neurotrophins are now implicated in hard tissue regeneration. It is well known that neurotrophins and their receptors are expressed in tooth development. Recent studies have found that neurotrophins and Trk receptors are expressed in mouse osteoblastic cell lines. Human periodontal ligament cells, human gingival fibroblasts, and human gingival keratinocytes expressed mRNA for NGF and TrkA. The secretion of bioactive NGF peptides from human periodontal ligament cells and human gingival keratinocytes was confirmed by bioassay using PC12 cells (rat adrenal pheochromocytoma cells). The expression of NGF and TrkA.mRNA was regulated by interleukin (IL)-1beta. NGF increased DNA synthesis and expressions of mRNA for bone-related proteins, alkaline phosphatase, and osteopontin in human periodontal ligament cells. Neurotrophins and Trk receptors expressed in human periodontal tissue may contribute to regeneration as well as innervation of periodontal tissue through local autocrine and paracrine pathways. Recent data suggest that some functions of neurotrophins and Trk receptors relate to periodontal disease and periodontal tissue regeneration. However, in vivo studies will be required to clarify the roles of neurotrophins and their receptors, including p75, in periodontal disease and periodontal tissue regeneration.

L7 ANSWER 21 OF 28 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:380429 BIOSIS
DOCUMENT NUMBER: PREV200300380429

TITLE: DEPLETION OF BDNF INDUCES DELAY OF REGENERATION OF THE PERIODONTAL RUFFINI ENDINGS.
AUTHOR(S): Harada, F. [Reprint Author]; Maeda, T. [Reprint Author]; Hoshino, N. [Reprint Author]; Iijima, K. [Reprint Author]; Kawano, Y. [Reprint Author]; Hanada, K.; Atsumi, Y.; Wakisaka, S.
CORPORATE SOURCE: Oral Anatomy, Orthodontics, Niigata University, Niigata, Japan
SOURCE: Society for Neuroscience Abstract Viewer and Itinerary Planner, (2002) Vol. 2002, pp. Abstract No. 849.4. http://sfn.scholarone.com. cd-rom.
Meeting Info.: 32nd Annual Meeting of the Society for Neuroscience. Orlando, Florida, USA. November 02-07, 2002. Society for Neuroscience.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 20 Aug 2003
Last Updated on STN: 20 Aug 2003

AB The periodontal Ruffini endings have been reported to show immunoreactivity for TrkB, a receptor for brain derived neurotrophic factor (BDNF), suggesting its involvement in development/regeneration of these receptors. In this study, we investigated the regeneration process of the periodontal Ruffini endings (PRE) in heterozygous mice with target disruption of BDNF gene. Transection of the inferior alveolar nerve (IAN) was performed in the heterozygous and littermate wild-type mice. The cut ends of IAN were returned into the mandibular canal, and the wound was sutured. The animals were allowed to survive for 3, 7, 10, 14, 21 and 28 days. After each determined period, they were perfused transcardially with 4% paraformaldehyde in 0.1 M phosphate buffer. After decalcification of mandibles including incisors, serial frozen sections were cut at a thickness of 30 mum. Neural elements in the lingual ligament were demonstrated by immunohistochemistry for PGP 9.5, a general neuronal marker. In the wild-type mice, the regeneration of the PRE completed around postoperative 21 days, consistent with our previous reports. In the heterozygous mice, on the other hand, the regeneration of the PRE delayed. The lower density and malformation of the regenerated PRE were recognized even at postoperative 28 days. These findings indicated that the depletion of BDNF induced delay of the regeneration of the PRE, suggesting that they require BDNF for regeneration.

L7 ANSWER 22 OF 28 MEDLINE on STN DUPLICATE 10
ACCESSION NUMBER: 2000221165 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10759411
TITLE: The Ruffini ending as the primary mechanoreceptor in the periodontal ligament: its morphology, cytochemical features, regeneration, and development.
AUTHOR: Maeda T; Ochi K; Nakakura-Ohshima K; Youn S H; Wakisaka S
CORPORATE SOURCE: Department of Oral Anatomy, Niigata University School of Dentistry, Japan.
SOURCE: Critical reviews in oral biology and medicine : an official publication of the American Association of Oral Biologists, (1999) Vol. 10, No. 3, pp. 307-27. Ref: 138
Journal code: 9009999. ISSN: 1045-4411. L-ISSN: 1045-4411.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
General Review; (REVIEW)
LANGUAGE: English

FILE SEGMENT: Dental Journals; Priority Journals; Space Life Sciences
ENTRY MONTH: 200004
ENTRY DATE: Entered STN: 5 May 2000
Last Updated on STN: 5 May 2000
Entered Medline: 25 Apr 2000

AB The periodontal ligament receives a rich sensory nerve supply and contains many nociceptors and mechanoreceptors. Although its various kinds of mechanoreceptors have been reported in the past, only recently have studies revealed that the Ruffini endings--categorized as low-threshold, slowly adapting, type II mechanoreceptors--are the primary mechanoreceptors in the periodontal ligament. The periodontal Ruffini endings display dendritic ramifications with expanded terminal buttons and, furthermore, are ultrastructurally characterized by expanded axon terminals filled with many mitochondria and by an association with terminal or lamellar Schwann cells. The axon terminals of the periodontal Ruffini endings have finger-like projections called axonal spines or microspikes, which extend into the surrounding tissue to detect the deformation of collagen fibers. The functional basis of the periodontal Ruffini endings has been analyzed by histochemical techniques. Histochemically, the axon terminals are reactive for cytochrome oxidase activity, and the terminal Schwann cells have both non-specific cholinesterase and acid phosphatase activity. On the other hand, many investigations have suggested that the Ruffini endings have a high potential for neuroplasticity. For example, immunoreactivity for p75-NGFR (low-affinity nerve growth factor receptor) and GAP-43 (growth-associated protein-43), both of which play important roles in nerve regeneration/development processes, have been reported in the periodontal Ruffini endings, even in adult animals (though these proteins are usually repressed or down-regulated in mature neurons). Furthermore, in experimental studies on nerve injury to the inferior alveolar nerve, the degeneration of Ruffini endings takes place immediately after nerve injury, with regeneration beginning from 3 to 5 days later, and the distribution and terminal morphology returning to almost normal at around 14 days. During regeneration, some regenerating Ruffini endings expressed neuropeptide Y, which is rarely observed in normal animals. On the other hand, the periodontal Ruffini endings show stage-specific configurations which are closely related to tooth eruption and the addition of occlusal forces to the tooth during postnatal development, suggesting that mechanical stimuli due to tooth eruption and occlusion are a prerequisite for the differentiation and maturation of the periodontal Ruffini endings. Further investigations are needed to clarify the involvement of growth factors in the molecular mechanisms of the development and regeneration processes of the Ruffini endings.

L7 ANSWER 23 OF 28 MEDLINE on STN DUPLICATE 11
ACCESSION NUMBER: 1997456917 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9310873
TITLE: In vitro studies on periodontal ligament cells and enamel matrix derivative.
AUTHOR: Gestrelius S; Andersson C; Lidstrom D; Hammarstrom L; Somerman M
CORPORATE SOURCE: BIORA AB, Malmo, Sweden.. stina.gestrelius@biora.se
SOURCE: Journal of clinical periodontology, (1997 Sep) Vol. 24, No. 9 Pt 2, pp. 685-92.
Journal code: 0425123. ISSN: 0303-6979. L-ISSN: 0303-6979.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 199712

ENTRY DATE: Entered STN: 9 Jan 1998
Last Updated on STN: 3 Mar 2000
Entered Medline: 4 Dec 1997

AB The recognition that periodontal regeneration can be achieved has resulted in increased efforts focused on understanding the mechanisms and factors required for restoring periodontal tissues so that clinical outcomes of such therapies are more predictable than those currently being used. In vitro models provide an excellent procedure for providing clues as to the mechanisms that may be required for regeneration of tissues. The investigations here were targeted at determining the ability of enamel matrix derivative (EMD) to influence specific properties of periodontal ligament cells in vitro. Properties of cells examined included migration, attachment, proliferation, biosynthetic activity and mineral nodule formation. Immunoassays were done to determine whether or not EMD retained known polypeptide factors. Results demonstrated that EMD under in vitro conditions formed protein aggregates, thereby providing a unique environment for cell-matrix interaction. Under these conditions, EMD: (a) enhanced proliferation of PDL cells, but not of epithelial cells; (b) increased total protein production by PDL cells; (c) promoted mineral nodule formation of PDL cells, as assayed by von Kossa staining; (d) had no significant effect on migration or attachment and spreading of cells within the limits of the assay systems used here. Next, EMD was screened for possible presence of specific molecules including: GM-CSF, calbindin D, EGF, fibronectin, bFGF, gamma-interferon, IL-1 beta, 2, 3, 6; IGF-1,2; NGF, PDGF, TNF, TGF beta. With immunoassays used, none of these molecules were identified in EMD. These in vitro studies support the concept that EMD can act as a positive matrix for cells at a regenerative site.

L7 ANSWER 24 OF 28 MEDLINE on STN DUPLICATE 12
ACCESSION NUMBER: 1996312990 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8708140
TITLE: Comparative study of the chemotactic responses of periodontal ligament cells and gingival fibroblasts to polypeptide growth factors.
AUTHOR: Nishimura F; Terranova V P
CORPORATE SOURCE: Laboratory of Tumor Biology and Connective Tissue Research, Columbia University, New York, NY 10032, USA.
CONTRACT NUMBER: DE08188 (United States NIDCR NIH HHS)
DE09411 (United States NIDCR NIH HHS)
SOURCE: Journal of dental research, (1996 Apr) Vol. 75, No. 4, pp. 986-92.
Journal code: 0354343. ISSN: 0022-0345. L-ISSN: 0022-0345.
PUB. COUNTRY: United States
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 199609
ENTRY DATE: Entered STN: 19 Sep 1996
Last Updated on STN: 3 Mar 2000
Entered Medline: 10 Sep 1996

AB Selective recruitment of periodontal ligament cells to a previously exposed root surface is believed to enhance periodontal regeneration. It has been hypothesized that competition from gingival fibroblasts may reduce the potential of periodontal regeneration. We compared the migratory responses of PDL cells and gingival fibroblasts to a variety of biologicals. Parallel

experiments designed to examine the directed migration responses of both periodontal ligament cells (PDL cells) and gingival fibroblasts (GF) isolated from the same donors were conducted using Platelet Derived Growth Factor (PDGF), Insulin Like Growth Factor-I, -II (IGF-I, -II), Epidermal Growth Factor (EGF), Transforming Growth Factor-beta (TGF-beta), and the chemotactic factor derived from the conditioned culture media of PDL cells (termed PDL-CTX) as attractants. Both PDL cells and GF exhibited dose-dependent migratory responses when challenged with PDGF, IGF-I, IGF-II, EGF, and TGF-beta. However, when these cells were challenged with PDL-CTX, only PDL cells migrated in a specific dose-dependent manner, while GF were refractive to PDL-CTX stimulation. Additionally, concentrated conditioned culture media from cultures of gingival fibroblasts did not stimulate PDL cell migratory responses. In other experiments, antibody directed against PDGF, FGF, TGF-beta, IGF-I, IGF-II, NGF, and EGF did not inhibit the PDL-CTX-elicited response in PDL cells. Previous studies have suggested that success of periodontal therapy depends on the specific attachment, migration, and proliferation of selected periodontal ligament cells. The data presented in this manuscript suggest that both PDL cells and gingival fibroblasts respond to a multitude of growth factors. PDL-CTX was found to be PDL-cell-specific for directed migration. Thus, we conclude that any biological therapeutic regime for periodontal regeneration should include PDL-cell-specific agents.

L7 ANSWER 25 OF 28 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN

ACCESSION NUMBER: 1995:230421 BIOSIS
DOCUMENT NUMBER: PREV199598244721
TITLE: Teeth and tooth nerves.
AUTHOR(S): Hildebrand, C. [Reprint author]; Fried, K.; Tuisku, F. [Reprint author]; Johansson, C. S. [Reprint author]
CORPORATE SOURCE: Dep. Cell Biology, Univ. Linkoping, Linkoping, Sweden
SOURCE: Progress in Neurobiology (Oxford), (1995) Vol. 45, No. 3, pp. 165-222.
CODEN: PGNBA5. ISSN: 0301-0082.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Jun 1995
Last Updated on STN: 9 Jun 1995

L7 ANSWER 26 OF 28 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN

ACCESSION NUMBER: 1995:2318 BIOSIS
DOCUMENT NUMBER: PREV199598016618
TITLE: Polypeptide growth factors: Molecular mediators of tissue repair.
AUTHOR(S): Lynch, Samuel E. [Reprint author]; Giannobile, William V.
CORPORATE SOURCE: Inst. Molecular Biology Inc., One Innovation Drive, Worcester, MA 01605-4308, USA
SOURCE: Genco, R. [Editor]; Hamada, S. [Editor]; Lehner, T. [Editor]; McGhee, J. [Editor]; Mergenhagen, S. [Editor]. (1994) pp. 415-425. Molecular pathogenesis of periodontal disease.
Publisher: American Society for Microbiology (ASM), Books Division, 1325 Massachusetts Ave. NW, Washington, DC 20005-4171, USA.
Meeting Info.: Symposium. Buffalo, New York, USA. June 1993.
ISBN: 1-55581-075-6.
DOCUMENT TYPE: Book
Conference; (Meeting)

Book; (Book Chapter)
Conference; (Meeting Paper)
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Jan 1995
Last Updated on STN: 5 Jan 1995

L7 ANSWER 27 OF 28 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
ACCESSION NUMBER: 1992:401838 BIOSIS
DOCUMENT NUMBER: PREV199243057713; BR43:57713
TITLE: IMMUNOHISTOCHEMICAL STUDY OF NERVE REGENERATION AFTER REPLANTATION.
AUTHOR(S): KAMASAKI N [Reprint author]; MAEDA T; KOZAWA Y; TAKAGI H; IZUMI H
CORPORATE SOURCE: NIHON UNIV SCH DENTISTRY, MATSUDO 271, CHIBA
SOURCE: Journal of Dental Research, (1992) Vol. 71, No. SPEC. ISSUE, pp. 742.
Meeting Info.: JOINT MEETING OF THE 70TH GENERAL MEETING OF THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH (IADR), 40TH ANNUAL MEETING OF THE BRITISH DIVISION OF THE IADR, 1992 ANNUAL MEETING OF THE CONTINENTAL EUROPEAN DIVISION OF THE IADR, 8TH ANNUAL MEETING OF THE IRISH DIVISION OF THE IADR, AND THE 75TH ANNUAL MEETING OF THE SCANDINAVIAN ASSOCIATION FOR DENTAL RESEARCH, GLASGOW, SCOTLAND, UK, JULY 1-4, 1992. J DENT RES.
CODEN: JDREAF. ISSN: 0022-0345.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 26 Aug 1992
Last Updated on STN: 27 Aug 1992

L7 ANSWER 28 OF 28 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
ACCESSION NUMBER: 1991:121615 BIOSIS
DOCUMENT NUMBER: PREV199140053300; BR40:53300
TITLE: MESENCHYMAL CELL GROWTH FACTORS.
AUTHOR(S): GRAVES D T [Reprint author]; COCHRAN D L
CORPORATE SOURCE: DEP ORAL BIOL PERIODONTICS, BOSTON UNIV SCH GRADUATE DENTISTRY, BOSTON, MASS, USA
SOURCE: Critical Reviews in Oral Biology and Medicine, (1990) Vol. 1, No. 1, pp. 17-36.
ISSN: 1045-4411.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 7 Mar 1991
Last Updated on STN: 7 Mar 1991

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     FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE' ENTERED AT 22:25:56 ON 11 MAR 2010
L1             0 SEA FILE=MFE SPE=ON  ABB=ON  PLU=ON  PERIODONTAL AND (TRANSPLAN
                 T OR IMPLANT) AND BIODEGRADABLE AND (BRAIN(W) DERIVED(W)
                 NEUROTROPHIC(W) FACTOR OR BDNF OR NERVE(W) GROWTH(W) FACTOR OR
                 NGF OR NEUROTROPHIN(W) 3 OR NEUROTROPHIN(W) 4/5)
L2             0 SEA FILE=MFE SPE=ON  ABB=ON  PLU=ON  PERIODONTAL AND (TRANSPLAN
                 T OR IMPLANT) AND BIODEGRADABLE AND (BRAIN(W) DERIVED(W)
                 NEUROTROPHIC(W) FACTOR OR BDNF OR NERVE(W) GROWTH(W) FACTOR OR
                 NGF OR NEUROTROPHIN(W) 3 OR NEUROTROPHIN(W) 4)
L3           126 SEA FILE=MFE SPE=ON  ABB=ON  PLU=ON  PERIODONTAL AND (BRAIN(W)
                 DERIVED(W) NEUROTROPHIC(W) FACTOR OR BDNF OR NERVE(W) GROWTH(W)
                  FACTOR OR NGF OR NEUROTROPHIN(W) 3 OR NEUROTROPHIN(W) 4)
L4            57 SEA FILE=MFE SPE=ON  ABB=ON  PLU=ON  L3 AND REGENERATION
L5             0 SEA FILE=MFE SPE=ON  ABB=ON  PLU=ON  L4 AND BIODEGRADABLE
L6             2 SEA FILE=MFE SPE=ON  ABB=ON  PLU=ON  L4 AND (TRANSPLANT OR
                 IMPLANT)
L7            28 DUP REM L4 (29 DUPLICATES REMOVED)
L8             2 DUP REM L6 (0 DUPLICATES REMOVED)
                 DIS IBIB ABS L8 1-2
                 DIS IBIB ABS L7 1-28

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CA SUBSCRIBER PRICE                                 0.00      -6.80

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